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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,863	07/03/2003	Ulrich Muller	239953US0X	3849
22850	7590	12/09/2004	EXAMINER KEYS, ROSALYND ANN	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			ART UNIT 1621	PAPER NUMBER

DATE MAILED: 12/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/611,863

**Applicant(s)**

MULLER ET AL.

**Examiner**

Rosalynd Keys

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7,9 and 10 is/are pending in the application.
- 4a) Of the above claim(s) 9 and 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-7,9 and 10 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/4/04</u> . | 6) <input type="checkbox"/> Other: _____  |

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**DETAILED ACTION**

***Status of Claims***

1. Claims 1-7, 9 and 10 are pending.  
Claims 1-7 are rejected.  
Claim 8 is cancelled.  
Claims 9 and 10 are withdrawn from consideration.

***Election/Restrictions***

2. See previous office action, mailed June 29, 2004.

***Information Disclosure Statement***

3. The information disclosure statement filed November 4, 2004 has been considered.

***Claim Objections***

4. Claim 6 is objected to because of the following informalities: the word "epoxides" after the word "epoxide" in line 3, should be deleted. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

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6. Claims 1-7 are rejected under 35 U.S.C. 102(a) as being anticipated by Muller et al. (US 2003/0078311 A1).

Muller discloses the instant method of preparing a polyoxyalkylene alcohol et al. (see entire disclosure, in particular paragraphs 0006 to 0069).

7. Claims 1-5 are rejected under 35 U.S.C. 102(a) as being anticipated by Mueller et al. (DE 1011230, which is equivalent to US 2004/0097724 A1)).

Muller et al. teach the claimed invention (see abstract provided by Applicants in their IDS or paragraphs 0006 to 0013, paragraphs 0025 to 0030 and paragraph 0043 of US 2004/0097724 A1).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claims 1, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mueller et al. (DE 1011230, which is equivalent to US 2004/0097724 A1) in view of Hamilton (US 3,328,467), for the reasons given in the previous office action, mailed June 29, 2004.

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11. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamilton (US 3,328,467) in view of Yaghi (US 5,648,508), for the reasons given in the previous office action, mailed June 29, 2004.

### ***Response to Amendment***

#### **Specification**

The objection to the disclosure because of typos is withdrawn, since these typos have been corrected via the amendment filed September 29, 2004.

#### **Claim Rejections - 35 USC § 102**

12. The rejection of claim 8 under 35 U.S.C. 102(a) as being anticipated by Muller et al. (US 2003/0078311 A1) is withdrawn, since this claim has been cancelled.

13. The rejection of Claim 8 under 35 U.S.C. 102(b) as being anticipated by Hamilton (US 3,328,467) is withdrawn, since this claim has been cancelled.

14. The rejection of claim 8 under 35 U.S.C. 103(a) as being unpatentable over Mueller et al. (DE 1011230, which is equivalent to US 2004/0097724 A1) in view of Hamilton (US 3,328,467) is withdrawn, since this claim has been cancelled.

15. The rejection of claim 8 under 35 U.S.C. 103(a) as being unpatentable over Hamilton (US 3,328,467) in view of Yaghi (US 5,648,508) is withdrawn, since this claim has been cancelled.

### ***Response to Arguments***

#### **Specification**

16. The objection to the incorporation of essential material in the specification is withdrawn.

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Rejection of claims 1-8 under 35 U.S.C. 102(a) as being anticipated by Muller et al. (US 2003/0078311 A1).

17. Applicant's arguments filed September 29, 2004 have been fully considered but they are not persuasive. The Applicants argue that Mueller et al. do not describe a process, which comprises alkoxylating a monool with at least one alkoxylating agent to obtain a polyoxyalkylene alcohol in the presence of a catalyst, which comprises a metallo-organicframework material of metal ions, and at least bidentate coordinately bound organic ligands. Applicants' argument is based on the premise that of Mueller et al.'s possible choices of organic compounds (at least 60 different general and specific organic compounds) they do not include a monool. This argument is not persuasive because in paragraph 0066 Mueller et al. teach that in principle all organic compounds, which can be alkoxylated, may be used. This would include monools, since the alkoxylation of alcohols, including monools, is well known (a reference need not disclose what is well known in the art. *In re MYERS*, 161 USPQ 668 (CCPA 1969). Further, a prior art disclosure is not limited to its working examples or to its preferred embodiments, but must be evaluated for what it teaches those of ordinary skill in the art. *Merck & Co. Inc. v. Biocraft Labs. Inc.*, 874 F.2d 804, 807, 10 USPQ2d 1843, 1846 (Fed. Cir. 1989); *In re Fracalossi*, 681 F.2d 792, 794 n.1, 215 USPQ 569, 570 n.1 (CCPA 1982); *In re Lamberti*, 545 F.2d 747, 750, 192 USPQ 278, 280 (CCPA 1976); *In re Boe*, 355 F. 2d 961, 965, 148 USPQ 507, 510 (CCPA 1966).

For the above reasons the Examiner believes that Mueller et al. anticipate the instant claims and thus this rejection is maintained.

Rejection of claims 1-5 under 35 U.S.C. 102(a) as being anticipated by Mueller et al. (DE 1011230, which is equivalent to US 2004/0097724 A1)

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18. Applicant's arguments filed September 29, 2004 have been fully considered but they are not persuasive. The Applicants argue that Mueller does not describe a process, which comprises alkoxylating a monool with at least one alkoxylating agent to obtain a polyoxyalkylene alcohol in the presence of a catalyst, which comprises a metallo-organic framework material of metal ions, and at least bidentate coordinately bound organic ligands. Applicants' argument is based on the premise that Mueller et al. describe a general procedure for the preparation of metallo-organic frameworks (MOFs) and their potential catalytic applications (see paragraphs (0019j)-(0024) and (0027)-(0028)). The Applicants argue that amongst the 31 general and specific reaction types, Mueller suggests alkoxylation. However, in the context of Mueller's disclosure, alkoxylation is related to the addition of alcohols onto acetylenes or allenes (see (00311)-(00321). Within the framework of Mueller's disclosure, the alkoxylating agent is the alcohol (or monool). This is in contrast to that which is claimed in Claim 1 in which the monool and alkoxylating agent are different entities. Accordingly, it is believed that Mueller's disclosure is incapable of sufficiently supporting a prima facie case of obviousness. This argument is not persuasive because Mueller et al. teach that the MOF catalysts may be applied to alkoxylation reactions (see paragraphs 0006-0013; paragraphs 0027-0028 and paragraph 0043). Alkoxylation reactions are generally known to be based on the reaction of an alkoxylatable compound with alkylene oxide in the presence of a catalyst. One having ordinary skill in the art would expect that Mueller et al. has applied this customary meaning to their use of the term alkoxylation. The reaction between the alcohol and acetylenes or allenes disclosed in paragraphs 00311-00321 of Mueller et al. is not an alkoxylation reaction. Further, Mueller et al. disclose this reaction in paragraphs 00311-00321 as a reaction of a C-C triple bond and not as an alkoxylation (see paragraph 0030).

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The Examiner believes that Mueller et al. anticipates the instant claims because Mueller et al. teach that the MOF catalyst may be used as a catalyst in alkoxylation reaction. The Examiner believes that this disclosure includes alkoxylation of a monool, since the alkoxylation of a monool was well known at the time of Mueller et al.s' invention.

For the above reasons the Examiner believes that Mueller et al. anticipate the instant claims and thus this rejection is maintained.

Rejection of claims 1, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mueller et al. (DE 1011230, which is equivalent to US 2004/0097724 A1) in view of Hamilton (US 3,328,467).

19. Applicant's arguments filed September 29, 2004 have been fully considered but they are not persuasive. The Applicants argue that it is difficult to envision why Hamilton's process, which is optimized using an aluminosilicate material, would be capable of occurring using Mueller's material. Applicants respectfully request that the Examiner recognize the that union of Mueller and Hamilton should be broken in as much as Hamilton's disclosed process would not lead one of ordinary skill to employ Mueller's MOFs as a catalyst for a alkoxylation involving a monool and an alkoxyating agent. This argument does not address the issue brought up in the previous office action and thus, it fails to overcome the rejection. In the previous office action the Examiner asserts that Mueller et al. differs from the instant invention in that they do not disclose the steps of the alkoxylation reaction. The Examiner combined Mueller et al. with Hamilton to show that the steps of an alkoxylation reaction were well known at the time of Mueller et al.s' invention and thus would have been inherent in the teachings of Mueller et al. Mueller et al. need not disclose the alkoxylation steps, since they were well known (a reference need not disclose what is well known in the art. In re MYERS, 161 USPQ 668 (CCPA 1969). With



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respect to the second paragraph on page 9 of Applicants' arguments, the Applicants set forth the same argument here as they did in the second paragraph on page 8. This argument is not persuasive for the same reason it was not persuasive earlier (see paragraph 16 above).

For the above reasons the Examiner believes that Mueller et al. in view of Hamilton renders obvious the instant claims and thus this rejection is maintained.

Rejection of claims 1-7 under 35 U.S.C. 103(a) as being unpatentable over Hamilton (US 3,328,467) in view of Yaghi (US 5,648,508)

20. Applicant's arguments filed September 29, 2004 have been fully considered but they are not persuasive. The Examiner believes that the ordinary skilled artisan would believe that the MOF catalyst of Yaghi would be capable of substituting for the aluminosilicate catalyst of Hamilton for at least the reasons given in the previous office Further, in column 4, lines 28-41 of Hamilton teaches that the unique activity of the aluminosilicate catalyst is dependent upon the active sites, thus the defined pore size of the aluminosilicates is to be considered. Yaghi teaches that the capability of rationally designing the shape, size, and function of the pores of zeolites or microporous materials was lacking. Thus, Yaghi has come up with a crystalline microporous material which have controlled pore distributions and sizes, which is an improvement over the art (see column 3, lines 38-53). The microporous materials prepared by Yaghi have use in catalysis. The Examiner does not believe that the combination of Hamilton and Yaghi is unpredictable. Based upon the above teachings of Hamilton and Yaghi, one having ordinary skill in the art would reasonably believe the Yaghi catalyst is an acceptable, if not an advantageous, substitution for the catalyst of Hamilton. The ordinary skilled artisan would reasonably expect to obtain success in using the catalyst of Yaghi in the process of Hamilton, since

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the use of a catalyst having a certain pore size is important to Hamilton's process and Yaghi teaches that his catalyst has a controlled pore distribution and size, which is an improvement in the art, and that it is useful in catalysis.

For the above reasons the Examiner believes that Hamilton in view of Yaghi renders obvious the instant claims and thus this rejection is maintained.

### ***Conclusion***

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Umbach et al. (US 3,651,152) teaches alkoxylation of compounds containing hydroxyl groups, including monools (see entire disclosure, see in particular column 3, line 34 to column 4, line 51). Thus, the alkoxylation of a monool is well known.

22. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

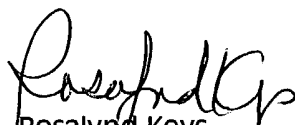
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rosalynd Keys whose telephone number is 571-272-0639. The examiner can normally be reached on M, R and F 3:00-8:00 pm and T-W 5:30-10:30 am.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Rosalynd Keys  
Primary Examiner  
Art Unit 1621

December 8, 2004